

Study on Joint Forest Management conducted by TERI for Ministry of Environment and Forests

Executive summary

The increasing depletion of India's forest resources has brought into sharp focus the inherent inadequacy of traditional state owned and run systems of forest management in sustaining the forest resource base against the growing human and livestock population pressures, industrialisation, urbanisation and overall economic development. The crisis in Indian forestry relating to high rates of deforestation, and unregulated and unsustainable use of forest produce in the past, can be attributed to the twin processes of erosion of customary resource management regimes and the acquisitive tendencies of the state in the period following independence. The effective and meaningful involvement of local communities has been attempted under the Joint Forest Management System in India by linking socio-economic incentives and forest development.

Joint Forest Management (JFM) is a concept of developing partnerships between fringe forest user groups and the Forest Department (FD) on the basis of mutual trust and jointly defined roles and responsibilities with regard to forest protection and development. In JFM, the user (local communities) and the owner (Government) manage the resource and share the cost equally, however it is difficult to generalize the JFM concept and approach in the light of variations across the nation with respect to geography, resource base, socio-economic status, cultural diversity and pressures on forests.

JFM is slowly emerging into a form of sustainable forestry, which augments the forestry regime with processes for rapid adaptation to changes in what people need, want, and can do. As an adaptive social process it is striving to create sufficient future forest production opportunity to satisfy potentially competitive/conflicting interests that would diminish the forest if left unresolved. The challenge with JFM has thus been to develop social processes that recognize, accommodate, and respond more effectively to diverse and dynamic perspectives of what the forest is about and should be.

With a view to address some important silvicultural, productivity, institutional, benefit sharing and marketing related issues in JFM, the Ministry of Environment and Forests, Government of India awarded the *National Study on Joint Forest Management* to the Tata Energy Research Institute, New Delhi. The objective of the study was to review the institutional framework for JFM and to study the technology and suitable silvicultural practices for increasing the productivity of degraded forests through participation of local communities. Apart from undertaking primary survey in four states - Andhra Pradesh, Orissa, West Bengal and Madhya Pradesh, experiences, literature and documentation from all the 22 states implementing JFM in India were extensively consulted to undertake this assignment.

After the National JFM guidelines were issued in 1990, 22 States are now implementing the programme. The JFM programme has evolved to different levels across these States. While West Bengal, Haryana and Orissa have completed two decades of JFM initiation, others like Assam, Sikkim and Mizoram have issued enabling orders in 1998 and accordingly the issues for which they are seeking solutions are different. Against this backdrop, as part of the current study, the Government of India guidelines of 1990 was reviewed to assess the necessity for revising them. The major findings of the study, the emergent issues and strategies for future JFM implementation have been presented briefly in the order of institutional, benefit sharing, marketing, productivity, and silvicultural aspects, followed by comments on the National Guidelines for JFM.

Institutional

- While the primary objective of the JFM programme continues to be rehabilitation of degraded forestlands with peoples organisations (Village Forest Committees - VFCs), in the course of evolution, approaches like village resource development, micro watershed development have got integrated into JFM as most State governments are attempting to improve the socio-economic status of forest-dependant communities in order to reduce pressure on forests.
- The VFCs across States vary in nomenclature, structure and composition in the absence of a binding national definition on one hand and differing local needs, socio-cultural context and nature of the forest resource base, on the other. A number of self initiated groups are also involved in forest management.
- In most States, the VFCs are registered with the FD, while they are societies in Haryana and co-operatives in Gujarat. In Uttar Pradesh, VFCs have been characterized as Forest Officers under the Village Forests, under section 28 of the Indian Forest Act 1927, thus empowering village community with the rights of the FD over the Reserve Forest. Similar provisions could be worked out by different States as the need for providing VFCs some form of tenurial security and legal sanctity has emerged strongly.
- The powers vested in the FD like the ability to resolve disputes, disband a badly functioning committee, cancel membership, nominate NGOs for membership, etc. provide for an unequal relationship between the FD and the VFC which

further strengthens the need for a legal backing for the VFCs. Legal recognition is also becoming essential for the many self initiated committees which are increasingly getting replaced or pushed aside by State evolved and recognized VFCs. However, this issue needs in-depth examination.

- A morass of resolutions, laws, policies, acts, etc., many of which are conflicting, ambiguous, contradict each other and lack legal validity or can be superseded on the basis of legal technicalities, are governing the implementation of JFM and the functioning of JFM institutions in many States. A better understanding and resolution of these should be done at the earliest to sustain the JFM programme.
- Further, current legal and policy provisions on forests, forestry, revenue land, rights and concessions including cess, grazing issues, customary laws, nistar rights, effect of Panchayati Raj on JFM, NTFP collection, its use, marketing, etc. need to be reviewed in light of JFM.
- Flowing from the above is the issue of traditional rights and privileges provided to communities for accessing fuelwood, fodder, timber, NTFP, etc., and the conflicts arising out of restrictions on these with the implementation of JFM.
- The functioning of the FD has undergone change in most States with the top-down planning and implementing approach being progressively replaced by the decentralized approach with emphasis on capacity building at the grassroots. Awareness and training programmes conducted by the FD for the VFC members, has further bridged the gap. It is hoped that the heavy reliance of the VFCs on the FD would also be reduced through these capacity-building exercises.
- Microplanning exercises and preparation of annual work plans by the villagers, with help from the FD, could help in creating awareness among the VFCs on the programme activities, the money involved, the quantum of work to be done annually, the wage employment to be generated, etc. This would help VFCs become self-reliant and at the same time promote greater transparency and awareness of rights and obligations into the FD-VFC partnership for JFM. However, the FD in its supervisory and monitoring role also needs to retain the ability to see that these committees do not renege on their promise and keep protecting the forests in an efficient fashion whilst continuing to enjoy the fruits of their labour.
- FD as facilitators and monitors of JFM also need to be sensitive to VFC problems and aspirations. The FD role in programme initiation is crucial as it has to reconcile the needs of socially and economically stratified castes and communities, to help people overcome their individual differences, to motivate them to make some sacrifices in the interests of the forest and to mobilize them to collective action. Their crucial role in conflict resolution, motivation, etc. therefore cannot be over emphasized.

- While ensuring equity in JFM institutions is crucial, it is a difficult task. Making provisions in State resolutions for representation of Scheduled Castes, Scheduled tribes, the landless, women and the marginalised sections, in the general body and management committee is the first step. The FD and NGOs have a major role to play in solving equity issues since, as catalysts, they could ensure participation of all societal sections in meetings, and decision making process, impartial functioning, equitable benefit-sharing mechanisms for forest produce and other indirect benefits like wage employment, etc.
- NGOs are increasingly getting involved with JFM. They have an important role to play in capacity building, information dissemination, monitoring and evaluation, policy making and as facilitators in the programme implementation. However, NGO involvement needs to be on a more continuous and sustained basis, which is however constrained by lack of implementation freedom owing to dependence on donors. NGOs need to work more closely for the implementation of projects that will help to alleviate the pressure on forests as well as increase their reach in motivation and community mobilization exercises.
- Currently JFM activities in different States are being funded from existing programmes of the FD, inter-departmental linkages, donor/externally aided project and from funds generated by village communities, and hence most activities undertaken are ad hoc and lack continuity. In order that activities like microplanning, awareness generation, training, skill development, managerial capacity building, enterprise development and many others that are crucial for JFM are undertaken on a regular basis, a separate fund or a budgetary allocation has to be created for JFM. This could be done either through resolutions or Working Rules in individual states.
- Substantial village/community funds have been generated by VFCs from voluntary contributions, money obtained in lieu of protection, membership fees, voluntary labour contributions, the sale of surplus forest produce and of timber harvests, fines generated through social fencing activities, revenue generated against the use of the committees forests, etc. However, norms for their creation, structure and utilisation need to be evolved to ensure transparency, accountability and efficiency of use in both village development and forest regeneration activities.
- Monitoring and evaluation of JFM programmes is not being done either at the VFC, State or National level. There is however, a great need for M&E exercises to be undertaken at the (i) VFC level to ensure the achievement of equity in representation, decentralisation of power, equal distribution of benefits, etc.; at (ii) the State-level on programme implementation, community participation, impact on forests, benefits distribution, etc., and (iii) the National-level to assess the overall impact of the programme, the future directions and strategy, areas under community protection, number of VFCs, etc.

- While some State resolutions have provided for womens representation in the VFCs and their management committee, alarmingly many lack even this fundamental attempt to secure gender equality, totally ignoring womens rights and entitlements. However, certain states have successfully created womens groups called Bairani Kuldihs (womens kitty) in MP, Women Self-help Groups, locally known as Mahila Podupu Sangam or Awal Thrift Groups in AP, which have not only enhanced participation but have also led to economic empowerment of women.
- The positive effects of JFM on womens emancipation notwithstanding, there is still much that needs to be done for integrating women completely and seeing that they get a good deal, particularly since the programme can impact them adversely. To start with States must ensure equality in representation, participation, decision-making, wages, planning, implementation, monitoring, etc. Therefore, it would be an important step for all the States to specify that the minimum requirement for VFC membership is that at least one woman from each household participate in the committees activities.
- The FD needs to devise strategies for reaching out to women better by increasing the female staff of the FD at all levels, and by increasing the number of women extension workers. This is where NGOs, other government departments, etc. need to take the lead in motivating and mobilizing women and in working in conjunction with the forest department to achieve this end.
- For FD to perform this complex task of JFM implementation, the Divisional Forest Officer (DFO) and staff need support from within and outside the department. While reorganization and restructuring of the department is not a feasible solution, JFM implementation could be facilitated by reduction in transfer frequency, inter-linkages with other departments, increasing field staff or village workers to enhance interaction with VFCs, involving NGOs, etc..
- The experience with the involvement of the Panchayats in JFM and other forestry activities has been mixed. Many State resolutions have Panchayat members as ex-officio members of the VFCs and interestingly, in the two states where Panchayat involvement is strong (West Bengal and Orissa), the fear that peoples participation will be hindered are, at present, unfounded. On the other hand Panchayat involvement could infuse much needed developmental assistance into JFM. With proper checks and balances, a close and beneficial partnership between the two can become a reality and is perhaps a necessity in the changed scenario where the concept of JFM is being expanded to include developmental and watershed level activities.
- Major reasons of conflict are demarcation of forest boundaries, forest ownership, and tenurial rights and responsibilities. With maturity of JFM institutions, issues that are seen to take precedence are sharing of benefits derived from wage employment, usage of the forest, political interference, inter- and intra-village conflicts related to interests, lack of transparency in account keeping, iniquitous

distribution of gains and opportunities, leadership issues, representation in the Management Committee of traditionally marginalised sections of the village, norms governing the functioning of the committees, inter-departmental conflicts, etc.

- Dispute arbitration is emerging as a major role for the FD and other agencies like NGOs, Panchayat members, and the committee and village members themselves as well as other interested parties such as political leaders and press. Training on conflict minimization and mitigation techniques for the FD and the VFCs has become a necessity.

Benefit sharing

- Forest-user communities across the country, dependent on forests for fuelwood, fodder, small timber and NTFPs, have accessed forest products under different rights regimes. During the pre-JFM period, in some States, communities have accessed forest products under rights and concessions provided under settlements. In others, communities have illicitly extracted forest produce, with or without the knowledge of the FD field staff.
- However, under the JFM programme, residents of forest-fringe villages have been provided access to forest produce to meet their basic needs of fodder, fuelwood and NTFP. In lieu of this, people are protecting and managing the forests with the FD.
- In most VFCs, social fencing is being practised for forest protection. Regular voluntary patrolling by villagers is a common practice while the number of members in the patrol party is seen to vary between 2-10 depending upon the value of the timber in the forests and consequently the severity of threat to the forests. The FD is therefore benefiting from reduced workload for forest protection and also reduced expenditure on protection structures like Cattle Proof Trenches/Walls.
- Fuelwood in the form of dry and fallen twigs and leaves from the forests is now available to participating communities. Fuelwood generated from various silvicultural operations, also supplement fuelwood supply in different states. The proportion of the harvest that goes to the communities share varies across States. While Andhra Pradesh, Madhya Pradesh, Gujarat, and Orissa give 100% of the produce harvested, Arunachal Pradesh 50%, West Bengal 25% and so on. In Maharashtra and Tripura, people's needs have been accorded first priority. In Andhra Pradesh and West Bengal, fuel-efficient improved stoves have been provided to the villagers.
- In pre-JFM period, people either had no grazing rights or had limited grazing rights as in Andhra Pradesh, Madhya Pradesh and Darjeeling Gorkha Hill Council areas. However, instances of uncontrolled and excessive grazing in forests were common, accelerating forest destruction. With JFM, there has been

a ban on uncontrolled grazing. While some States like Gujarat, Haryana and Punjab have banned grazing completely, other States have allowed for rotational grazing. These practices have helped the regeneration and survival of vegetation in forests, and in increasing supply of fodder grasses. Livestock population in most areas is on the increase owing to better fodder supply, but there is a need for a well-defined national policy on grazing to sustain fodder supply from forests by supplementing it by non-forest sources and instituting change in livestock composition.

- Most States did not allow any rights or share for people in from forest products like NTFP, timber and other intermediary products in the past, which has however changed with JFM. All NTFP, barring few nationalized products, are now available to the people free of royalty in all states. People have a right to collect even the nationalized products like Kendu leaves, Sal seeds etc. but have to deposit these with the agency responsible for procurement and earn a prescribed wage. Apart from these, certain other provisions have been made like in Andhra Pradesh, where 50% of net income from increased yield of Kendu leaves is equally distributed among the VFC members, in South-west Bengal people get 25% of the net profit from cashew, etc. Income accruing to members is substantial notwithstanding the poor infrastructure for marketing or processing of NTFPs.
- VFCs are also entitled to a share in the timber harvest in varying proportions of 100% in Andhra Pradesh, Tamil Nadu and Bihar and varies across a minimum of 20% in Nagaland to the maximum of 50% in Arunachal Pradesh, Orissa, Gujrat, Karnataka, Rajasthan, Tripura and Uttar Pradesh. There are provisions for contribution to Village Development Fund from a portion from peoples share from final harvest proceedings and is as high as 50% in Andhra Pradesh, Bihar and Rajasthan. In Haryana and HP, 100% of the proceeds go into community fund, which are to be spent for village as well as forest development as. However, in States where final harvesting has taken place like in West Bengal, the actual quantum of income that has accrued per family has varied from as low as Rs 50 to as high as Rs 13,600 across different sites in West Bengal.
- There has been a significant shift in the labour utilization patterns in communities across various States owing to the increased supply of fodder and fuelwood, this is more significant with respect to women. A major proportion of the time saved is spent in pursuing some income generating activities, both forests related and others.
- Women have been able to minimise, and in some cases eliminate dependence on moneylenders, with their savings through the self-help groups in Andhra Pradesh and Madhya Pradesh. Another significant outcome of additional income opportunities has been a marked decrease in seasonal out-migration from programme villages as seen in Andhra Pradesh. Increased agricultural productivity owing to investments in agricultural inputs and irrigation infrastructure has resulted in greater incomes as seen in Andhra Pradesh,

Madhya Pradesh and Haryana. Efforts for skill development, primary processing, markets are still lacking.

Marketing

- There are three types of products available to communities in JFM areas (i) immediate products like NTFPs, grass, fuelwood available almost immediately or after a time period depending upon the state of degradation of the forest that is being managed jointly, (ii) intermediate products from operations like thinning, other cultural operations, and (iii) final products like timber from fellings. In a majority of the States, however, JFM is still in the initial stages, and hence marketing has not emerged as an important issue for consideration.
- Marketing of forest products is either by state agencies or through the alternative markets controlled by middlemen/intermediaries. At the state level there are Corporations such as Forest Development Corporations, Forest Industries Development Corporations, etc for marketing of specific forest products and apex agencies like Marketing Federations such as Tribal Marketing Federation of India, which organise the marketing of forest products. There are co-operatives of the forest gatherers such as Girijan Co-operative Societies as in Andhra Pradesh, Girijan Co-operative Service Societies as in Kerala, Large Scale Adivasi Multi-purpose Society as in the states of Karnataka, Tamil Nadu, Orissa, West Bengal and so on.
- Of the JFM states, forest produce marketing is most developed in the pioneering state of West Bengal. Marketing of timber and poles was by the FD during pre-JFM period. Currently VFC members receive 25% of the net sale proceeds of the final harvest sold by the Forest Corporation in open auctions attended by concerned VFC. In Orissa, produce from cultural operations is locally consumed. In Andhra Pradesh, wood from thinnings and bamboo harvested from forests is marketed by the FDC independently or auctioned by the FDC in the presence of VFC members.
- The share of forest products to communities varies as per provisions in the various State orders for JFM. However, from the experience of different states it is evident that the VFC share is rather minimal in case of high revenue earning NTFPs like tendu leaves where communities receive only collection wages. Madhya Pradesh is however an exception where benefit sharing with VFCs and FPCs is real and profit sharing in case of NTFPs is effective and substantial. Markets for timber and fuelwood are largely informal. However, State agencies such as FD and FDCs do have a major role in the marketing of timber and fuelwood.
- In case of timber marketing, provisions in the JFM resolutions and government regulations require the VFCs to take permission from FD for felling and transport of timber and thus, they are unable to get involved in timber marketing.

Therefore among the critical considerations for timber marketing in JFM areas are:

- i. involvement of committees in timber marketing and benefit sharing,
 - ii. balancing demand, supply and prices,
 - iii. rationalising restrictions on the flow of products and role of intermediaries,
 - iv. reviewing and redefining the role of state agencies,
 - v. helping VFCs establish links with other agencies like consumers, and
 - vi. exploring the established infrastructure of agricultural markets for forest produce marketing.
- NTFP marketing varies across JFM states in terms of market structure, marketing channels, price, scope for value added processing and so on, depending on the nature of the products, their legal status and a host of other factors. Further, policies on nationalisation, free trade, usufructary rights, etc. also play a role.
 - Marketing of nationalised NTFPs is by the state agencies in which the collectors receive a wage. However, these agencies are unable to pay even the minimum support price due to lack of capital and bureaucratic wrangles resulting in the stranglehold of the alternative market owing to its ability to pay instantly and reach difficult areas.
 - Marketing of non-nationalised NTFPs is open for competition however, In many VFCs, barter system is common where NTFP are exchanged for sugar, corn, rice, wheat, etc. NTFP value addition and processing is nearly absent in most VFCs. VFC members receive about 10 - 20% of the price fetched by sal leaf plate or Chironji in the retail market. There are no records on NTFPs especially on the quantum transacted, price paid or the consumers. NTFP inventory describing distribution, extinction status, extent and use across states is crucial.
 - Market intermediaries dominate NTFP marketing, as NTFPs require time, storage, space, technology and transportation before they reach the final consumers. Poor communication and transportation facilities, highly segregated markets, and unequal bargaining power between buyers and sellers make the field more profitable for middlemen, especially since the state run co-operatives are mired in inefficiencies, corruption and lacklustre performance.
 - Community involvement in NTFP management needs to be ensured in (i) technology for collection, preservation and regeneration; (ii) scientific harvesting and handling; and (iii) planned extraction and management based on an NTFP database. Among the important strategies that need to be adopted in different JFM states are:
 - i. Review of the NTFPs policy, rules and procedures so that enabling policies and institutions can be set up as a part of NTFP marketing strategy,

- ii. Critical review of the existing long-term leases of NTFPs to private individuals and companies,
- iii. Incorporation of sustainable management and harvesting practices of forest produce including NTFPs in Microplans and Working Plans,
- iv. FDCs and FDs need to create a separate marketing and extension wing responsible for developing and implementing a JFM marketing strategy,
- v. Rationalisation of restrictions on felling and transport of forest produce and/or providing for a single window system of granting government permission,
- vi. Defining role for VFC and their federations in the management, processing and marketing of NTFP by facilitating the VFCs to develop primary storage and processing facilities thereby minimising the role of intermediaries and ensuring a fair price to villagers by retaining the benefits locally,
- vii. Providing VFCs area- and product-specific responsibilities, by appointing them as sub-agents by the FDC/TDCC or other agencies in the case of nationalised NTFPs,
- viii. Where ever price fixation committees for NTFPs exist, like in Orissa, VFC representatives and their federations should be involved at the District and State levels,
- ix. Involving NGOs in imparting skill development activities to VFCs for better collection, processing, value addition and marketing of forest produce.

Productivity

In a number of States including the study states of Andhra Pradesh and Madhya Pradesh, regulation of biotic interference and prevention of forest fires followed by in-situ and ex-situ soil and moisture conservation are among the basic approaches to stem vegetation, soil and water loss.

Forestry operations like cleaning, weeding, multiple shoot cutting, singling, thinning etc. have been adopted for creating conditions favourable for regeneration in the areas under community protection.

On an average, 40% of the sites across the four study states showed improvements in the regeneration status owing to protection against biotic pressure, fires and illicit felling; another 20% are showing positive trends. While 15 - 20% of the sites are not responding to interventions owing to continued biotic pressures like grazing and wood extraction, the remaining sites have been treated only in 1998 and it is too early to discern any trend. Also, sites that have a pre-dominance of non-browsable species have shown positive results. On an average high plant densities were observed in regeneration class at 70% sites and remaining sites had high plant densities in recruitment class.

JFM sites that were provided better protection and where the institutions were strong had maximum augmentation of volume and density per hectare in the lowest class owing to better regeneration. However, the lack of regeneration was observed in sites

where illicit felling of wood was ongoing. A maximum increment in densities in the 20-40 cm basal girth class was observed in the sites where committees were offering good protection.

Some sites had higher timber volume and densities per hectare in the lowest diameter class (less than 20-cm basal girth) like in Madhya Pradesh.

In areas where extensive plantations have been taken up and are under community protection, the plantation strata volume per hectare has increased. Tree canopy cover in sampled sites ranged from 4.22 per cent to 59.72 %. However high tree canopy cover was seen in sites, which had good cover status at the time of commencement of JFM programme.

In order to provide incentives to communities for economic returns to sustain forest protection and management efforts, different states are adopting practices for augmenting supply of NTFPs like grasses, bamboo, fruits, etc. In some states grafted varieties of fruit bearing species are being planted in blocks, forest blanks and along trenches, homesteads and agriculture bunds.

In order to reduce pressure on forests for fuelwood, different states are advocating the use of fuel-efficient devices like stoves and Biogas plants. Other states are promoting tree plantations through their agro-forestry and other plantation programmes in JFM villages.

Similarly steps to augment supply of fodder from outside forest areas is being promoted through creation of pasture plots, growing of grasses and legumes along contour mounds, shallow trench mounds, etc.

Improved agriculture is being promoted with the creation of irrigation infrastructure in many states. This has been possible because of increased availability of ground water and better moisture regimes with soil and water conservation measures being implemented in the JFM areas. Farmers are also being encouraged to grow high yielding crop varieties with good seeds and fertilisers.

Silvicultural

- While technical consideration in Indian Forestry have remained unchanged over the past century, the objectives of forest management have undergone many changes over the same period. These changes are distinct with respect to the JFM programme, which envisages the rehabilitation of degraded forests through natural regeneration and improving productivity of forest products, particularly NTFPs, to meet village communities requirements.
- A shift therefore, from the present practice of management of forest for climax species like Sal or Teak, to a silvicultural system that focuses on developing seral/intermediate species forests, is desirable.

- Specific aspects like regeneration of degraded lands, nursery management, NTFP management, fodder management, fuelwood management, fire management and the importance of protection as an important technique to regenerate the forest areas, have come to fore.
- Among the major strategies adopted for regeneration of degraded sties are natural regeneration, enrichment planting, protection from fire and grazing and artificial plantation. Gap plantations of NTFPs, fodder trees, legumes and grasses are being undertaken in most JFM States. There are but few instances of extensive soil and water conservation measures being taken up alongside protection and planting, while these are as crucial for rehabilitation of degraded and eroded forest areas.
- Improved planting material is being used for rehabilitation efforts in select States like Andhra Pradesh, Maharashtra, Madhya Pradesh and Uttar Pradesh. Not many States are involving communities in production of improved planting material while the possibility exists. Decentralised nurseries are also non-existent in most JFM states except for a few in Madhya Pradesh, West Bengal, Uttar Pradesh, etc. and communities are involved in nurseries as wage labour only.
- In Andhra Pradesh, a series of training programme were organised to train the villagers on nursery management, soil and moisture conservation etc. People need to be involved in plantation activities from the nursery stage and in species selection to instil a sense of ownership in them. It would also be essential for the FD to take up capacity building for people by providing training in seed collection and advanced techniques like clonal propagation and grafting to the beneficiaries for an assured supply of quality planting material and as an income opportunity for them.
- Non timber Forest Products (NTFPs) meet the daily sustenance needs of the people and therefore, hold importance for JFM areas. In order to augment the supply of NTFPs from JFM areas, NTFP species are being introduced under different plantation programmes. In nearly 90% of the JFM areas in Andhra Pradesh, NTFP species that are locally in use and have a local market (mostly non-nationalised), have been planted in blocks or in gaps.
- While social fencing has been adopted to prevent incidence of grazing in forest areas across most states, physical barriers like fencing, cattle proof walls and/or trenches are not uncommon. Though regulated grazing is being practised in a few states, open grazing is still evident in a number of states.
- West Bengal has attempted to increase fodder supply through the Area oriented fuel and fodder project and by encouraging fodder inter-cropping in agriculture fields. In AP it is proposed to develop one-hectare fodder plots in all JFM areas. However, these attempts are inadequate. It is evident that any attempts at closure or total ban against grazing option would be impossible to implement in the

absence of alternatives like raising pasture area/plots and introduction of stall-feeding and livestock improvement.

- Fuelwood is the most important commodity that people access from forest areas. However, the estimated available quantities of dry twigs and fallen wood are far below the actual quantities removed. With JFM, there has been an increase in the availability of fuelwood to villagers in South West Bengal, Haryana, Andhra Pradesh among other states. However in Orissa and adjoining sal areas of West Bengal, fuelwood is supplemented with dry leaves (December to May). Most cultural and intermediate operations like bush cutting, culling, thinning, etc. undertaken by the FD also provide fuelwood to people. There have been attempts by the FD to raise fuelwood plantations as in West Bengal and also distribute improved *chullahs*, biogas plants etc. as in AP to a limited extent. However, there is immense scope and also necessity to integrate rural energy component with JFM programme.
- Another important activity where community participation is crucial is fire management in forests. In Madhya Pradesh and Andhra Pradesh, VFCs are involved in creating and maintaining fire lines by cleaning them regularly and in putting out forest fires, which has resulted in good regeneration in hitherto vulnerable areas. The FD has organised training programmes in different states to impart advanced fire-fighting skills to FD field staff and VFC members.
- While Microplans are being prepared in JFM states, most of them seem to override the importance of forest resource inventories. Baseline data on forests in terms of crop composition, productivity, etc. are lacking. In Madhya Pradesh, the Government Order on JFM makes it necessary that the Microplans replace the Working Plans. However, the efficacy of this needs to be assessed.
- It is essential that JFM communities are involved in the preparation of Microplans, which have details of village development activities and usufruct sharing, in addition to forest development plan, while reflecting the overall objectives of Working Plans.
- Forest protection has been provided by communities through patrolling on a rotational basis or having a paid watcher against grazing, fires, illicit felling, etc. The effect of increasing years of protection is reflected in positive trend with respect to various forest and ecological parameters such as grass productivity, tree count, basal area, and regeneration of trees and shrubs. There have also been umpteen examples of VFC members fighting organised gangs of timber smugglers at great risk in many states including Andhra Pradesh, Madhya Pradesh, Orissa and West Bengal. However, system of reward to VFCs from such efforts are yet to be worked out and implemented in many states. Another crucial achievement of community involvement has been the reclaiming of encroached lands under cultivation in a peaceful manner in many states like Andhra Pradesh, Madhya Pradesh and Orissa.

- It is essential that capacity building of villagers be carried out at the earliest on different aspects of JFM including concept, duties and responsibilities, microplanning, process documentation, monitoring, plantation, forest operations, and nursery techniques. Biodiversity conservation should be given due importance in training programmes. NGOs could be involved in undertaking these training programmes.
- Frequent impact assessment and monitoring of JFM activities including forestry operations by the communities would help ease the load on FD staff. For monitoring forest changes, in addition to permanent plots and baseline surveys, experimental plots should also be laid in the forest areas by the FD and VFCs.

National resolution on JFM, 1990

- The 1990 guidelines have paved the way for JFM across the country and 22 states have issued enabling orders till date. The major provisions of the National Resolution are:
 - i. Providing an enabling mechanism for participation of local communities and a platform for NGO participation,
 - ii. Facilitating institution building and allowed flexibility in their formation,
 - iii. Eliminating the involvement of commercial interests and the middlemen in the benefit sharing mechanism,
 - iv. Providing forest usufruct benefits to participating communities,
 - v. Providing for wage employment to local communities for some forest related work,
 - vi. Allowing for plantation of indigenous, multi-purpose species of trees and even grasses, shrubs and medicinal herbs,
 - vii. Ensuring that the FD only harvests in accordance with a working scheme prepared in consultation with local communities.
- The current study has revealed the existence of a vast diversity across the JFM states in terms of the social, cultural and economic contexts, the forest type and status, forest produce being accessed by people, etc.
- Different State Governments have issued orders and modified the same progressively to incorporate variations and major concerns that have arisen during the course of JFM implementation in their respective states.
- States have also issued working rules for JFM to further institutionalise the programme in the working of the respective State Forest Departments.
- Some aspects that have not been provided for by the National guidelines but have been incorporated by various State Governments in their order and/or working rules are:
 - i. Criteria of success, monitoring procedures and baseline surveys,

- ii. Defining the working scheme to be a working plan or a microplan or both depending upon the scale of planning,
 - iii. On the creation, management and use of village funds,
 - iv. Grazing control mechanism,
 - v. Membership norms to encourage involvement of representatives of different hamlets, villages, landless labourers, village artisans, members of forest-based craft making communities, scheduled castes and tribes, etc. in the General body and Management Committee of the VFCs,
 - vi. The need for expanding the scope of JFM to include aspects of watershed development and holistic development that are now almost integral to JFM,
 - vii. Forum for conflict resolution/dispute arbitration,
 - viii. Financial provisions/arrangements for JFM programme,
 - ix. Registration of committees in some States providing them with several benefits in terms of legal sanctity and empowerment.
- The above reveals that the National Guidelines on JFM were broad and hence provided individual States the flexibility to issue enabling orders to incorporate local concerns, in consonance with the provisions of the Forest (Conservation) Act, 1980 and National Forest Policy, 1988. Individual State Governments have exhibited great insight, innovation and maturity in issuing enabling orders and working rules.
 - It is to be appreciated that JFM is a dynamic process and during the course of its evolution, a number of issues and suggestions would be emerging. In light of this, the National Guidelines would not be able to assimilate these diverse issues from across the country. At the same time it would not be practical to revise these guidelines as and when a new regime of issues and concerns would arise with the progress of JFM from its current infancy stage in many States to maturity over a period of time.
 - A plethora of issues have been identified by various studies conducted across the country by different agencies, by the Expert Consultation Group and the current National study. Various State Government Orders and Working Rules have addressed a majority of these issues, while efforts are ongoing in other States. These innovations and adaptations have been facilitated by the flexible and broad-based nature of the National Guidelines. The amending of these guidelines to incorporate all these issues would only render the guidelines more prescriptive and binding, which the process of JFM could ill-afford.
 - It is therefore essential that the National Guidelines on JFM issued in 1990 remain in their original form while State Governments could be encouraged and influenced by the GOI, NGOs, peoples groups and VFC representatives into incorporating major concerns relating to equity, equitable benefit sharing, gender sensitivity, conflict resolution, etc. into their Government Orders, Working Rules, FD functioning and JFM implementation.

As part of the National Study on JFM, an attempt was made to compile the total number of VFCs that have been formed across the 21 JFM states that have issued enabling orders and the area that is under JFM. Responses were received from 17 State Governments by the report finalisation and submission stage. Accordingly, there are 41,249 VFCs in 17 states and a total of 11.24 million hectares of forest land is under JFM in 14 states. Of the 17 State Governments who responded, Karnataka, Punjab and Tripura Governments did not furnish details of area under JFM.

This site will be updated soon.

For further details please contact

i) Dr. V.K. Bahuguna, Incharge of the Joint Forest Management Cell,

Dy. Inspector General of Forests, Forest Protection Division, Ministry of Environment and Forests, Government of India, New Delhi.

Tel & Fax. No.4360379 (O)

Email : bahugunaifs@yahoo.com

ii) Dr. Anoop Upadhyay, Asstt. Inspector General of Forests, Ministry of Environment and Forests, Government of India, New Delhi.

Tel No. 4363984 (O)

Email : aku@menf.delhi.nic.in
